REMARKS

In reply to the Office Action dated October 23, 2006, Applicants have amended claims 18, 22, 24, 25, 29, 30, 32, 35, 44, and 52 to clarify the claimed invention without narrowing the literal or equivalent scope of protection afforded by these claims. As a result of this Amendment, claims 18-25 and 27-52 are currently pending.

As an initial matter, Applicants appreciate the Examiner's decision to withdraw the previous ground for rejection based on the arguments presented with the Amendment After Final dated September 27, 2006. Applicants also appreciate the Examiner's indications that (1) independent claim 25 would be allowable if amended to overcome the Examiner's objection to the use of the term "an annular valley" and (2) dependent claims 24, 35, and 52, which each depend from independent claims 18, 32, and 44, respectively, would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. In response, Applicants have amended independent claim 25 by replacing the term "an annular valley" with the term "valleys" as the Examiner requests. *See* Office Action at page 2. Applicants have also placed claims 24, 35, and 52 in independent format by including the features of any base and intervening claims therein. Accordingly, claims 24, 25, 35, and 52 are now allowable.

On page 2 of the Office Action, the Examiner objected to the disclosure for allegedly failing to provide adequate support for "the substantial width of the reinforcement being greater than a single corrugation, including a single crest and trough." The Examiner also objected to claims 24 and 25 based on several minor informalities. In response, Applicants have amended claims 18, 24, 25, and 29 to

obviate the Examiner's concerns. For instance, Applicants have broadened the scope of the claims by (1) removing the term "adjacent" from claim 24 and (2) removing the limitations in claims 18 and 29 drawn to the width of the reinforcement relative to a single corrugation. Accordingly, the claims and disclosure fully comply with U.S. patent practice.

As discussed on page 3 of the Office Action, the Examiner rejected claims 29 and 32 under 35 U.S.C. § 102(b) as being anticipated by Bonnema et al. (U.S. Patent No. 4,913,473). The Examiner also rejected claims 18-23, 27-34, and 36-51 under 35 U.S.C. § 103(a) as being unpatentable over Goddard (U.S. Patent No. 6,126,209) in view of Bonnema et al. (U.S. Patent No. 4,913,473) and further in view of Fawley et al. (U.S. Patent No. 5,632,307), according to the rationale discussed on page 4 of the Office Action.

Bonnema et al., Goddard, and Fawley et al., however, fail to render the claimed invention unpatentable. Each of the claims recite specific combinations of features that distinguish the invention from the prior art in different ways. For example, independent claim 18 recites a combination that includes, among other things:

> an annular band of reinforcing material disposed around the exterior surface of the female end at a position along the longitudinal axis thereof that is in general alignment with the sealing element, the reinforcing material arranged to prevent loss of a water-tight sealing engagement between the female end and the sealing element when the female end is subjected to a predetermined level of internal pressure,

(claim 18, ll. 6-11). Independent claim 29 recites another combination that includes, *inter alia*,

> an annular reinforcement member separately applied around the exterior surface of the female end, the annular reinforcement member having a width that is greater than the width of the sealing element, the annular reinforcement member being disposed substantially upstream

> from the sealing element and configured to resist loss of a water-tight sealing engagement between the female end and the sealing element during use of the pipe,

(claim 29, ll. 7-13). Independent claim 30 recites yet another combination that includes, for example,

> an annular band of reinforcing coating separately formed around the exterior surface of the female end at a position along the longitudinal axis thereof that is in general alignment with the sealing element, and structurally configured to preclude the corrugated pipe, which normally expands outwardly when subjected to a predetermined level of interior water pressure, from expanding outwardly at the site of the sealing element and losing a water-tight sealing engagement between the female end and the sealing element when the pipe is subjected to the predetermined level of interior water pressure,

(claim 30, ll. 6-13). Independent claim 32 recites another combination that includes, *inter alia*,

> a ring separately disposed around the female end and arranged to maintain a water-tight seal between an outer surface of the gasket and an inner surface of the female end when the male and female ends are subjected to the predetermined level of internal water pressure,

(claim 32, ll. 7-10). Finally, independent claim 44 recites a combination of that includes, for instance,

> a reinforcing member separately coated around an outer surface of the female end and structurally configured to maintain a water-tight seal between the outer surface of the corrugation of the male end and the inner surface of the female end when the pipe is subjected to a predetermined level of interior water pressure,

(claim 44, ll. 5-9). At the very least, Bonnema et al., Goddard, and Fawley et al. all fail to disclose or suggest any of these exemplary features recited in independent claims 18, 29, 30, 32, and 44.

To establish anticipation of claims 29 and 32 under 35 U.S.C. § 102(b), the Examiner must show that each and every feature recited in these claims is either

explicitly disclosed or necessarily present in a single prior art reference, such as within the four corners of the Bonnema et al. patent. *See* M.P.E.P. § 2131; *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). Moreover, to make out a *prima facie* case of obviousness as to the remaining claims, the Examiner must demonstrate (1) that Bonnema et al., as proposed to be repeatedly modified by the teachings of Goddard and Fawley et al., disclose or suggest each and every feature recited in the claim, (2) that there is a reasonable probability of success of such modifications, and (3) the existence of some suggestion or motivation, either in the teachings of the applied references themselves or in the knowledge generally available to one of ordinary skill in the art, to make such modification so as to result in the claimed invention. *See* M.P.E.P. § 2143. It bears emphasizing that each of these requirements must be found in the prior art — not based on Applicants' own disclosure. *See id.*

Bonnema et al. discloses a sealing element 36, a latch member 23 and a strap 37 for coupling together a male end 15a, 16 and a female end 15b of a large diameter double-walled pipe. *See* Bonnema et al. at Abstract; *see id.* at Fig. 8. Bonnema et al., however, fails to provide any disclosure of an annular band of reinforcing material, an annular reinforcement member, an annular band of reinforcing coating that is arranged to either prevent, resist, or preclude loss of a water-tight sealing engagement, as recited in independent claims 18, 29, and 30. Nor does Bonnema et al. disclose a ring or a reinforcing member that is arranged or configured to maintain a water-tight seal, as recited in greater detail in independent claims 32 and 44.

Instead, Bonnema et al. discloses that latch member 23 is free to swing inwardly and outwardly about an axis 27. *See id.* at col. 5, ll. 29-40. Bonnema et al. also discloses that belt 37 is simply designed to "insure retention of the latch members within the valley" regardless of the amount of "separation forces" between the latch member 23, the sealing element 36, and the outer wall 16. *See id.* at col. 7, ll. 16-20. Thus, there is no water-tight seal in Bonnema et al., let alone the claimed annular band, reinforcement member, reinforcing coating, ring, or reinforcing member. These features of the independent claims are simply not "necessarily present" in Bonnema et al., as required by 35 U.S.C. § 102. Consequently, Bonnema et al. cannot anticipate independent claims 18, 29, 30, 32, and 44.

Moreover, as repeatedly discussed in previous Amendments, Goddard discloses a pipe having an in-line bell. *See* Abstract. The Examiner again admits, however, Goddard fails to provide any disclosure of the claimed annular band, reinforcement member, reinforcing coating, ring, or reinforcing member, as recited in greater detail in the independent claims. Thus, Goddard cannot render any of the claims unpatentable.

Similarly, Fawley et al. cannot remedy the deficiencies of Bonnema et al. and Goddard. For example, the Examiner relies upon Fawley et al. solely to allegedly disclose the "use of an applied layer of glass fibers and an adhesive to the exterior of a pipe." Office Action at page 4. Modifying the Bonnema et al. and Goddard with the teachings of Fawley et al. thus cannot render the independent claims unpatentable.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of all the pending claims 18-25 and 27-52. Should it be necessary to resolve any

additional concerns and expedite the issuance of a Notice of Allowance, the Examiner is invited to contact Applicants' representative at (202) 408-6052.

Please grant any extension of time to the extent required to enter this response and charge any fees required to our Deposit Account No. 06-0916.

Respectfully submitted,

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